KF Streptococcus Agar Base

Intended Use
KF Streptococcal Agar Base is used for selective isolation and enumeration of faecal Streptococci in surface water by direct plating or by membrane filter method.

Summary
Streptococci are spherical, Gram-positive bacteria and form a part of the normal commensal flora of the mouth, skin, intestine, upper respiratory tract of humans. Streptococci found in the faeces form the faecal Streptococci and constitute of Streptococci with group D Lancefield antigens. The types include *Streptococcus faecalis Streptococcus faecium, Streptococcus bovis*, and *Streptococcus duran*. They are low-grade pathogens and rarely cause disease. However, they may cause urinary tract infection in catheterized patients; mixed abdominal wound infections following gut surgery; and endocarditis on abnormal valves. Kenner-Faecal (KF) Medium was developed by Kenner *et al.,* for detecting Streptococci in water and food materials. KF Streptococcus Agar Base is recommended by APHA for enumerating faecal Streptococci in food materials.

Principle
Proteose peptone and yeast extract provide nitrogen, carbon, sulphur, amino acids, vitamins and trace ingredients to the faecal Streptococci. Lactose and maltose are the fermentable carbohydrates and therefore serve as energy sources. Sodium azide is a selective agent, which hampers the growth of Gram-negative bacteria. Bacteria resistant to azide, utilize lactose and/or maltose. 2,3,5-Triphenyl Tetrazolium Chloride (TTC) is reduced to insoluble formazan by actively metabolizing bacterial cells, resulting in the formation of maroon colonies.

Formula*

Ingredients	**g/L**
Proteose Peptone	10.0
Yeast Extract	10.0
Sodium Chloride	5.0
Sodium Glycerophosphate	10.0
Maltose	20.0
Lactose	1.0
Sodium Azide	0.4
Agar	20.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples – faeces
Food and Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 76.40 g of the powder in 1000 mL purified / distilled water and add rehydrated contents of 1 vial of bromocresol purple.
2. Heat to boiling to dissolve the powder completely. Avoid overheating as it will lower the pH and render the medium less productive.
3. Do not autoclave.
4. Cool to 50°C and add 10 mL of TTC Solution 1% (204200740010).
5. Pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogeneous free flowing powder.
Prepared Appearance: Basal medium: Light yellow coloured.
After addition of Bromo Cresol Purple: Light purple to light grey coloured, clear to slightly opalescent gel with precipitate forms in petridishes.
Cultural Response: Cultural characteristics observed with added 1% TTC solution (204200740010) after an incubation at 35°C-37°C for 48-72 hours.

Organism (ATCC)	Growth	Colour of Colony
Enterococcus faecalis (29212)	Good	Red-Maroon
Klebsiella aerogenes (13048)	Inhibited	-
Escherichia coli (25922)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Kenner B. A., Clark H. F. and Kabler P. W., 1960, Am. J. Public Health, 50:1553.
2. Kenner B. A., Clark H. F. and Kabler P. W., 1961, Appl. Microbiol., 9:15.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201110020100	Dehydrated Culture Media	100 g
201110020500	Dehydrated Culture Media	500 g